

REMARKS

A final Office Action was mailed on May 5, 2003. Claims 1 – 24 are pending in the present application. Claims 1, 2, 5 and 15 are amended, and new claims 25 - 28 are added. No new matter is introduced.

REJECTION UNDER 35 U.S.C. § 103

Claims 1 - 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,418,558 to Roberts et al. Applicants amend claims 1, 2, 5 and 15 to further clarify the nature of their invention, and respectfully traverse this rejection.

In independent claims 1, 2, 5 and 15, Applicants disclose a communication system and method for processing messages in the communication system, where the communication system includes a plurality of subscriber-side units manufactured by different vendors and a station-side unit that accommodates the various subscriber-side units and is capable of communicating with all of the subscriber-side units by broadcast messages.

In accordance with Applicants' claimed method, the station-side unit broadcasts to all of the subscriber-side units a group designating message produced by a group designating message generating unit, the group designating message including designation information that designates a subset of the plurality of the subscriber-side units as a component constituting a group of units which are to receive a broadcast message (for example, all units manufactured by a single vendor).

A state control unit in each subscriber-side unit operates to receive the group designating message broadcast by the station-side unit to all of the subscriber-side units.

Each state control unit generates a status in response to receipt of the group designating message, and produces a valid status only if the associated subscriber-side unit is one of the designated subset of subscriber-side units. Only the subscriber-side units in the designated subset and having a valid status are allowed to receive and process the broadcast message.

Roberts discloses a hybrid fiber/coax video and telephony communication system including a station side unit 32 and a plurality of subscriber side units 540 (see, e.g., FIG. 96 of Roberts). As acknowledged by the Examiner, Roberts fails to disclose Applicants' claimed state control unit (as well as, for that matter, Applicants' group designating message generating unit). However, the Examiner maintains that Applicants' state control unit is obvious in light of the communications control means for identifying remote units that is disclosed by Roberts.

Roberts discloses a channel manager 900 that monitors channels and re-assigns subbands reallocation links between a head end 32 and ISUs 100 (see, e.g., column 112, lines 42 – 51 of Roberts). The Examiner notes that Roberts is thereby able to selectively transmit to fewer than all ISUs 100, and equates this capability with Applicants' claimed status control of subscriber-side units having a valid status. Applicants respectfully disagree.

Applicants claim a communication system and method in which a group designating message is broadcast to all subscriber-side units in order for a valid status to be set at each of a predetermined subset of subscriber-side units by means the group designating message. From this point forward, as messages continue to be effectively

broadcast to all subscriber-side units by the station-side unit, only those subscriber-side units having a valid status set are able to receive and process the broadcast messages.

In contrast to Roberts, Applicants communication system does not require a dedicated channel manager for assigning subbands to individual subscriber-side units in order that messages may be sent on a selected set of subbands to a limited number of subscriber-side units. Rather, Applicants teach a method and system in which communications continue to be transmitted in a full broadcast mode, and control is exercised by the individual subscriber-side units rather than centrally by a dedicated channel manager or similar device. Applicants' approach provides an advantage over Roberts in eliminating the separate control apparatus for reduced cost, and for simpler and more flexible designation of groups of subscriber-side units. It is particularly well-suited, for example, in the passive optical network (PON) embodiment disclosed in Applicants' FIG. 1.

Accordingly, Applicants respectfully submit that Applicants' invention as disclosed in independent claims 1, 2, 5 and 15 is not made obvious by Roberts, and therefore that claims 1, 2, 5 and 15 stand in condition for allowance. As claims 3, 4, 6 – 14 and 17 – 24 each depend from one of allowable claims 1, 2, 5 and 15, Applicants respectfully submit that claims 3, 4, 6 – 14 and 17 – 24 also stand in condition for allowance for at least this reason.

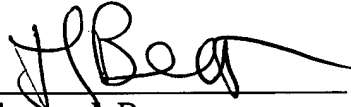
CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 – 28, which include independent claims 1, 2, 5, 15 and 25 – 28, and the claims that depend

therefrom, stand in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'TJ Bean', written over a horizontal line.

Thomas J. Bean
Reg. No. 44,528

CUSTOMER NUMBER 026304

KATTEN MUCHIN ZAVIS ROSENMAN
575 MADISON AVENUE
NEW YORK, NEW YORK 10022-2585
PHONE: (212) 940-8800/FAX: (212) 940-8776
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